#### **Federal Highway Administration**

# FY 2003

## **Performance And Accountability Report**

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#### **Letter from the Administrator**

In my fiscal year 2003 Accountability Contract with Transportation Secretary Mineta, I pledged to steer the Federal Highway Administration (FHWA) towards achieving the following Vital Few priorities:

- Promoting public safety by reducing significantly the number of transportation-related deaths and injuries, as well as the probability and potential severity of surface transportation incidents and crashes.
- Improving the surface transportation system by easing congestion bottlenecks and ensuring that system capacity is added, trip time reliability is improved, and transportation time for the individual user from origin to destination is reduced.
- Improving environmental decisionmaking processes in order to expedite surface transportation projects, while minimizing their impact on the human and natural environment.

We made good progress this year in implementing strategies that we believe will achieve these priorities over the next few years. For example, we see more interest among our partners in employing a comprehensive highway safety planning approach that focuses additional resources on reducing fatal crashes caused by roadway departures, at intersections, or involving pedestrians. With our state and metropolitan partners, we conducted assessments of traffic congestion management practices that led to an increased level of collaboration and brought a more strategic focus to addressing the causes of congestion. We accelerated our longstanding environmental stewardship and assisted our state partners with exemplary ecosystem improvements. We provided training, funding, and technical support to a growing number of states to



#### SUMMARY OF ACCOMPLISHMENTS

The following discussion summarizes Agency progress towards achieving the national goals and objectives, including the Vital Few. Progress is reported for each of the 21 national performance objectives in the Federal Highway Administration (FHWA) Administrator's fiscal year (FY) 2003 Executive Accountability Contract and the FHWA Performance Plan.

The actual results, and recent trends from 1998-2003, are reported against the targeted outcomes for each performance measure. A description of each performance measure is provided beginning on pp. 23 of the Report.

#### **GOAL: SAFETY**

In 2002, approximately 2.9 million people were injured and 42,815 were killed in highway-related crashes. While the number of fatalities was the highest since 1990, the number injured continued to decline. The highway fatality rate continued to decline also, albeit at a slower rate than in the past decade.

Safety	1998	1999	2000	2001	2002	2003	Target
Highway Fatalities	41,501	41,717	41,945	42,116	42,815	N/A	38,800
Highway Fatality Rate, as fatalities per 100 million vehicle-miles-traveled	1.58	1.55	1.53	1.51	1.50	N/A	1.40
Highway Injuries, in thousands	3,192	3,236	3,189	3,033	2,914	N/A	3,070
Highway Injury Rate, as injured persons per 100 million vehicle-miles traveled	121	120	116	109	102	N/A	109
N/A: Data will be available in mid-2004.				1950			

The FHWA is concentrating on reducing the most frequent types of fatal crashes: 38 percent of all fatalities occur in roadway departure crashes, 20 percent occur in crashes in or near an intersection, and 11 percent are pedestrians involved in a crash. A comprehensive self-assessment was undertaken in all of the states, the District of Columbia, and Puerto Rico, that resulted in a better understanding of where each state could strengthen efforts in these areas to reduce fatal highway crashes. The self-assessment also provided baseline information that was used to develop measurable performance targets. As an example, the assessment revealed that 7 states have implemented a high-quality, datadriven comprehensive safety plan and that it might be possible to increase this number to 10 or more in FY 2004.

## Reduce Fatalities Involving Roadway Departure Crashes (Vital Few).

Greater use of roadside hardware was promoted to prevent and mitigate the impact of run-off-the-road

crashes. By the end of FY 2003, highway agencies in 33 states had adopted policies consistent with the Agency's roadway shoulder rumble strips technical advisory. The FHWA continued to emphasize the need for state Departments of Transportation (DOTs) to replace non-crashworthy hardware, such as turned down ends on the National Highway System (NHS), and to implement a program to replace damaged hardware with crashworthy hardware.

The FHWA served as a national clearinghouse for the identification of suitable crashworthy roadside hardware. Amendments to the Manual on Uniform Traffic Control Devices were proposed that include methods to maintain traffic sign retroreflectivity, a measure that increases the brightness and visibility of traffic signs to drivers. The Agency supported research and technology transfer efforts to implement the interactive highway safety design model, an evaluation software package that marshals available knowledge about safety into a more useful form for highway planners and designers.

#### GOAL: MOBILITY AND PRODUCTIVITY

Traffic congestion on our nation's highways has increased over the past few years. Recent trends suggest that periods of recurring congestion are getting longer, particularly in urban metropolitan areas. In addition, congestion is no longer restricted to peak commuting periods and weekday travel. The FHWA measures traffic congestion nationwide by estimating the percentage of daily traffic in urbanized areas that is moving at less than free-flow speeds. By this measure, traffic congestion was 30.4 percent, which was below the projected increase to 31.1 percent in FY 2002. The FHWA is focusing on mitigating both recurring and non-recurring causes of congestion.

Mobility and Productivity	1998	1999	2000	2001	2002	2003	Target
Highway Congestion, percent of congested travel	28.3	29.0	29.3	30.4	30.4	N/A	31.6
Overall User Satisfaction, percent of total respondents	17 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		66	-		N/A	N/T
N/A - Data will be available in late	2004.						

## Further deploy Intelligent Transportation Systems (ITS) infrastructure and sustain improvements to system operating practices.

To ensure that technologies can work together smoothly and effectively, the FHWA continued to focus on establishing the technical and institutional framework needed for deployment of the ITS infrastructure. One hundred and twenty regional ITS architectures were completed and an additional 133 regional architectures are currently under development. Also, FHWA and the ITS Joint Program Office provided training and assistance to partner agencies in developing regional ITS architectures and in understanding how to properly use and maintain them once developed. Thirty-five regional architecture training courses and workshops were held during 2003.

An integrated ITS infrastructure in a metropolitan area provides significant advantages in reducing congestion through improved operations. As such, progress in achieving greater integration serves as a leading indicator of progress in congestion mitigation. The number of metropolitan areas with a medium or high level of deployment increased from 57 to 61 in FY 2003. The FHWA will continue to work aggressively with each of the 14 remaining metropolitan areas to reach the long-term goal of 75 areas with a medium or high level of deployment by January 2006. In addition, 85 projects in the ITS Integration Program

were approved during FY 2003, most of which support the goal of deploying integrated ITS infrastructure in metropolitan areas.

The FHWA awarded 44 planning grants to regions throughout the U.S. in order to continue the deployment of 511—the traveler information telephone number. With the AASHTO-led 511 coalition, the Agency developed guidelines and provided technical assistance and information through various means including a national 511 conference. The 511 telephone number is now accessible to about 16.5 percent of the Nation's population.

Implementation of the Intelligent Transportation Infrastructure Program continued in Chicago, Providence, Boston, San Diego, and Tampa. This program will eventually lead to the deployment of an infrastructure to support traveler information services in up to 21 metropolitan areas. Thirty-five states received funding assistance to improve the transportation component of their Amber Alert Assistance Program.

The FHWA released the Freight Analysis Framework (FAF) database of commodity flows and highway capacity. The FAF contains commodity flows and county-to-county traffic flows for 1998, by highway, rail, air, and water mode, as well as projections for 2010 and 2020.

Reduce traffic incident delay by ensuring that all states, the District of Columbia, Puerto Rico, and Federal Lands Offices are engaged in aggressively anticipating and mitigating congestion caused by traffic incidents (Vital Few).

Similar to efforts that focused on congestion in work zones, 71 comprehensive self-assessments of incident management practices were undertaken by FHWA and its partners in 64 of the top 75 congested urban metropolitan areas. A study of various types of performances measures used to evaluate the progress of traffic incident management programs around the country was completed. The assessment focuses on three areas of practice--program and institutional issues, on-scene operational issues, and communications and technology. The results revealed that on-scene operational issues were receiving the most attention, while program and institutional, and communication and technology issues were areas where significant improvements can be made.

Other activities related to reducing traffic incident delay were undertaken. With FHWA assistance, a traffic incident management work plan was written for the vehicle towing and recovery industry. The purpose of the document is to facilitate the understanding of traffic incident management programs within the industry and encourage tow operators to involve themselves in programs. A traffic incident management workshop was pilot tested and will be available in FY 2004. Under the auspices of the National Fire Services Incident Management System, a model procedures guide for highway incidents was completed that addresses on-scene incident command and control protocols for traffic incidents. A Computer-Aided Dispatch (CAD)-ITS field operational test began in Utah and Washington. It will provide for the integration of data among transportation management ITS and public safety CAD system databases in order to make rapid exchange of unambiguous incident-related information possible.

Improving the condition of pavement and bridges is critical to the structural integrity and cost effectiveness of the transportation system. The NHS represents just 4 percent of total highway miles, but carries 1 trillion, or approximately 43 percent of, vehicle miles traveled (VMT) annually. Drivers in the U.S. cross deficient bridges more than one billion times each day. While the 115,000 bridges on the NHS are in better condition than the total U.S. inventory of approximately 590,000 bridges, a significant number are still either structurally deficient or functionally obsolete. Progress was below expectations during 2002, primarily because of conditions in a small number of states.

Mobility and Productivity (continued)	1998	1999	2000	2001	2002	2003	Target
NHS Pavement Condition, as percent of VMT with acceptable ride quality	89.8	90.5	90.9	90.9	90.6	N/A	92.5
NHS Bridge Condition, as percent of deck area on deficient bridges adjusted for average daily traffic	32.6	31.9	30.8	30.6	29.9	30.2	27.5
Non-NHS Bridge Condition, as percent of deck area on deficient bridges adjusted for average daily traffic	32.5	32.0	32.6	32.3	31.9	31.8	29.7

#### GOAL: HUMAN AND NATURAL ENVIRONMENT

Before their value was fully recognized, many of the Nation's wetlands were adversely affected or lost in the development of highway and transportation facilities. In 1993, a national policy on wetland protection was established that called for no net loss of wetlands in federally funded projects. Since then, FHWA has exceeded a minimum target of 1.5 acres of wetlands per acre directly affected by Federal-aid highway projects on a program-wide basis. In FY 2003, the wetland mitigation ratio was 2.7:1.

The FHWA encourages ecosystem-related initiatives that are either unique in geographic scope, apply innovative scientific and technological practices, attain a high level environmental standard, achieve a high level of results, or are recognized as particularly valuable from an environmental perspective. In addition, FHWA promotes integrated approaches to multi-modal planning, the environmental review process, and project development at a systems level, as well as the use of context sensitive solutions (CSS) at a project level. In FY 2003, FHWA identified 3 new exemplary ecosystem initiatives bringing the overall total to 8. The FHWA recognized eight states as having fully adopted CSS that took into account many environmental aspects and seven states that have adopted integrated planning approaches.

Human and Natural Environment	1998	1999	2000	2001	2002	2003	Target
Project Wetlands Protection and Recovery	2.2	2.3	3.8	2.1	2.7	2.7	1.5
Exemplary Ecosystem Initiatives	-	-		-	5	8	8
Context Sensitive Solutions		-		alikas <u>i</u> en	5	8	8
Integrated Planning Approaches					7	7	N/T
N/T – No target was established.							

## Enhance knowledge of FHWA staff in areas of ecosystem and habitat conservation; showcase existing exemplary initiatives (Vital Few).

Agency staff increased their knowledge in areas of ecosystem and wildlife conservation through a wide range of activities. As an example, the FHWA sponsored the International Conference on Ecology and Transportation, which featured discussions about leading-edge science and technology for the ecological aspects of transportation development. Conference participants from state DOTs, resource agencies, academia, and private environmental organizations were provided with a critical opportunity to interact during these sessions. The FHWA prepared and distributed the results of the European Wildlife SCAN tour of 2001, which were also published in *Public* Roads magazine, and continued to offer training and technical assistance on ecology and wildlife related topics.

The FHWA provided assistance to state DOTs and showcased exemplary ecosystem initiatives by

demonstrating ecosystem management in 8 states, which accomplished outstanding examples of environmental stewardship. The Colorado Shortgrass Prairie Conservation Initiative was a recipient of a FHWA Environmental Excellence Award. Other exemplary ecosystem initiatives were featured on the FHWA web site.

The Agency will identify at least 22 more initiatives in the next 4 years across 12 additional states or Federal Lands Highway Divisions. The FHWA distributed guidance and criteria to its partner agencies to aid in the identification, selection, and promotion of these initiatives.

The FHWA continues to coordinate wetlands programs and research initiatives with Federal agencies including the Environmental Protection Agency (EPA), the Department of the Interior, the Department of Commerce, the Department of Agriculture, and the U.S. Army Corps of Engineers. The FHWA, EPA, and

Human and Natural Environment (Continued)	1998	1999	2000	2001	2002	2003	Target
Transportation Conformity Lapses			-	<u> </u>	6.0	6.0	≤ 6.0
On road Mobile Source Emissions, in Million Tons	66.927	63.98		N/A	N/A	N/A	61.800
Percent Nonattainment and Maintenance Areas Meeting Mobile Source Emissions Goals, Ozone	90	93	98	97	98	97	98
Percent Nonattainment and Maintenance Areas Meeting Mobile Source Emissions Goals, PM-10	96	100	100	94	96	94	86
Percent Nonattainment and Maintenance Areas Meeting Mobile Source Emissions Goals, CO	96	96	97	100	100	92	96
N/A - Data will be available in lat	e 2004.						

### Achieve reductions in on-road mobile source emissions.

From 1970 to 2000, mobile source emissions decreased 48 percent for carbon monoxide, 28 percent for nitrogen oxides, 50 percent for coarse particulate emissions, and 65 percent for volatile organic compounds. Further emissions reductions are anticipated in 2001 thru 2003 when data are available, and in future years, due to the introduction of low sulfur gasoline and diesel fuels as well as tighter engine emissions standards.

As of July 2003, the percent of metropolitan areas designated as nonattainment or maintenance that had met their on-road mobile source emissions budgets was 97 percent for ozone (90 out of 93 areas), 92 percent for carbon monoxide (49 out of 53 areas). and 93.5 percent for particulate matter (29 out of 31 areas). The percentages were down slightly from the same time in the previous year. Some areas had difficulty meeting their established budgets because the EPA placed new vehicle emissions factor model requirements in effect. Others were unable to meet the budgets that were established in State Implementation Plans using the older emissions factors model. In each area, FHWA worked with its partners to meet conformity and to ensure transportation projects would not be significantly delayed as a result.

The FHWA worked with the EPA and the Federal Transit Administration (FTA) to revise the existing conformity regulation to reflect a significant court ruling and to clarify and improve the transportation conformity process. Some nonattainment and maintenance areas may face challenges attaining new air quality standards for ozone and fine particulate matter when the EPA publishes a final rule in 2004. As a result, further reductions in pollutant emissions from transportation sources may be required. In anticipation of the implementation of new ozone and more stringent particulate matter standards, the FHWA is working with the EPA and the FTA on a separate conformity rule revision for the implementation of the new air quality standards. The EPA expects to publish the new standards rule by April 2004, and would allow newly designated nonattainment areas under the new standards to rely on the 1-year grace period before conformity applies.

The FHWA completed a transportation conformity scan at 6 nonattainment and maintenance areas to document and share experience and practices in meeting conformity requirements. In cooperation with the Association of MPOs, FHWA formed an Air Quality Subcommittee to address specific conformity issues faced by Metropolitan Planning Organizations (MPOs) on emissions modeling issues and emerging issues related to the new air quality standards.

These exercises, which resulted in a draft highway incident management protocol, brought together the transportation, police, fire, emergency medical, public health, emergency management, intelligence, and military communities to review highway response and recovery plans.

To further improve multi-agency response in responding to a major disaster, recommendations were developed to enhance incident scene voice communications interoperability for transportation agencies. In addition, demonstrations were conducted in key cities of automated incident data exchange between transportation management and public safety organizations, and communications interoperability and data exchange between transportation and other responders. Security guidelines addressing agencyowned telecommunication systems, transportation management centers, and transportation information systems were developed and/or revised. In the important area of evacuation, funding was provided for two demonstrations of advanced evacuation modeling, and a study of methods for developing alternate routes around damaged or destroyed critical transportation infrastructure was initiated.

The FHWA sponsored and actively participated in 11 emergency response-planning workshops in major metropolitan areas throughout the U.S. By the end of the year, emergency planning was enhanced at 21 of the top 30 metropolitan areas identified by the Department of Homeland Security as being at risk of a terrorist attack. The Agency also undertook several initiatives in support of transportation security, including the identification of information needs to better manage transportation systems following a major disaster; demonstration of ITS technologies that can be used to detect and deter terrorist attacks on transportation infrastructure. as well as advanced technologies to enhance communications interoperability and data exchange between transportation agencies and other emergency responders in Washington, DC and New York City; and the use of advanced modeling tools for evacuation route planning and automated incident data exchange between transportation management and public safety organizations.

#### Facilitate military deployment from forts to ports.

Working closely with the Military Traffic Management Command Transportation Engineering Agency, the Agency completed a military deployment coordination exercises in one state with key military installations, referred to as Power Projection Platforms. The program was interrupted by the mobilization for the conflict in Iraq, as military installations across the Nation went to heightened levels of alert, or actively engaged in the movement of troops, materials, and equipment, and were unable to participate in further exercises. Informal reports to date have not revealed any significant highway infrastructure issues that adversely impacted the mobilization.

#### Initiate research, technology development, and deployment activities in support of a more secure highway system.

The FHWA began an effort to address long-range security research needs of the Agency and its state and local program partners. Some of the future study areas may include research into bridge and tunnel responses to blast induced loadings or possible retrofit options for existing structures and design guidance for new structures that can yield important advances in rapid repair or replacement of damaged facilities. The need to consider options to restore transportation services following a nuclear or biological attack was also recognized, as well as to the extent of decontamination needed before a facility can be reopened to traffic. Another area that was identified is the development of traffic and freight flow simulation models that can be used quickly and with limited data to assess the impact of the loss of a particular facility and identify the optimum alternate route or routes.

Many of the technologies and procedures for improving the efficiency of freight movement also provide a security dividend. For example, electronic cargo seals are currently being tested on containerized freight to move efficiently through port gates and border crossings, as well as provide information regarding the unauthorized opening of container doors. Also, FHWA was a key contributor to public-private outreach efforts that provided invaluable support to the *Operation Safe Commerce* effort led by the TSA. This initiative is designed to stimulate the development of technology and procedural initiatives to enhance cargo security.

identifying emerging cost and funding shortfalls in projects. Project Management Plans that clearly define project roles, responsibilities, processes, and activities are strongly encouraged. These practices increase the likelihood that a project will be completed on time; within budget; with the highest quality; in a safe manner; and in a manner in which public trust, support, and confidence is maintained. In consultation with project staff, FHWA issued draft project management plan guidance for the Ohio River Bridges major project. Also, FHWA began preparing a project management plan for this major project, which will be included in final guidance for this project and may be used as a model for future major projects. The FHWA also issued a final rule on design-build contracting, which allows, but does not require, contracting agencies to use the design-build project delivery system as an option to the traditional design-bid-build project delivery system.

During FY 2003, the FHWA continued to encourage the use of innovative finance methods to leverage limited Federal funds and to expedite project completion. The FHWA also sponsored the Transportation Research Board Third National Transportation Finance Conference. An example of a project success was the Transportation Infrastructure Finance and Innovation Act (TIFIA) Joint Program Office's execution of a \$140 million loan for the construction of the SR-125 South Toll Road in San Diego. The project was the Department's first partnership with a private, for-profit highway operator. The TIFIA loan proceeds will be combined with equity funds and private bank debt assumed by the operator to construct a \$642 million, 9.2-mile link in the regional freeway network. The highway will accommodate economic growth in southern San Diego County and facilitate traffic and trade across the U.S./ Mexico border. The loan repayment structure adjusts to the financial performance of the toll road, requiring early retirement of the TIFIA debt in the event of profitable project economics.

The FHWA commissioned a review of the DOT's innovative financing techniques, titled *Performance Review of DOT Innovative Finance Techniques*, which was released in FY 2003. The report revealed that an \$8.6 billion Federal investment had resulted in \$29 billion in projects, a ratio almost three times better than the return under a traditional Federal-aid

program. The study also noted that as many as 50 projects were accelerated in their completion, ranging from 6 months to 24 years faster when compared to traditional programs.

The FHWA increased the percentage of obligated funds used for active projects, when compared to total expenditures, to 77 percent, above the target of 73 percent. A one percent increase in obligated funds used is equal to making about \$1.3 billion in federal- aid dollars available for use in other projects. The FHWA reduced the amount of federal- aid funds obligated, but not expended, to \$145 million from \$187 million in FY 2002. This represents a decline from FY 2003. However, the amount has fluctuated considerably with the lowest amount at \$92 million in FY 2000.

Establish timeframes for all current projects requiring EISs or Environmental Assessments (EA). Continue to reduce the environmental processing time for all EIS and EA projects (Vital Few).

The FHWA Division Offices initiated discussions with state Departments of Transportation to establish timeframes for projects requiring an EIS and EA. Negotiated timeframes were highlighted as a discussion topic in six interagency conflict management workshops sponsored by FHWA.

The median time for completing an EIS was 62 months in FY 2003. While the performance target of 51 months was not met, the median time for completing EIS projects was reduced from 80 months in FY 2002. A total of 228 EA were approved in FY 2003. The median time for completing an EA was 26 months, which was above the target of 17 months. A large number of projects initiated over 10 years ago reached a Record of Decision (ROD) during this fiscal year, and the results for these projects were included in the calculation of the median time. These projects resulted in a longer than anticipated processing time for projects overall, yet indicate that the Agency's efforts to promote collaboration and coordination in reaching a decision were successful.

While employee satisfaction has declined, FHWA was able to maintain employment at greater than 98 percent of full-employment levels. At the end of FY 2003, the Agency employed 2,390 staff out of its full employment level of 2,419 positions. This was achieved despite hiring difficulties encountered during the period that FHWA operated under a continuing resolution.

The FHWA invested an amount for training and development that was equivalent to approximately 2 percent of employee salaries and compensation in FY 2003. This was partly due to a one-third reduction in authorizations for employee training and development. In addition, FHWA operations were limited by several continuing resolutions, which limited the scheduling of employee training to only about 6 months. Under these conditions, meeting the annual target of 3 percent of salaries and compensation was especially problematic.

Establish, implement, and monitor a system of customer surveys, and Agency response to the feedback to improve customer service and satisfaction.

The FHWA initiated an ongoing Federal-aid partner satisfaction survey, which is being used to collect feedback from some agency partners in four stages over 2 years. Two surveys of partners in 26 states were completed in FY 2003. The overall satisfaction score from the two surveys for state DOT and MPO partners was 3.55 and 3.71, respectively (with 5 as very satisfied). State DOT partners were most satisfied with the technical assistance and training provided, while MPO partners were most satisfied with the development of transportation improvement plans. This four-stage survey approach establishes a baseline against which future customer service improvements will be assessed. The results are already being used to initiate discussions to improve FHWA products and services.

Develop and implement the FHWA Human Capital Plan and the Restructuring Assessment Task Force recommendations for Professional Development and Training.

The FHWA created an Advisory Committee to address internal workforce planning issues. A workforce analysis was completed and an initial assessment

of future needs was conducted. A draft Workforce/ Human Capital Plan was completed, which will be included in the DOT Workforce Plan to be released in FY 2004.

Lead and coordinate efforts to effectively perform the role of Innovator for a Better Future, and increase the effectiveness of all FHWA units, as well as our partners and stakeholders, in determining priorities and deploying technologies and innovation.

The FHWA Corporate Master Plan for Research and Deployment of Technology & Innovation (CMP) was released. The CMP includes formal recognition and organization of an Agency R&T Leadership Team, which has the primary responsibility for implementing 26 commitments in the CMP. One of the first commitments was to develop a list of FHWA priority, market-ready technologies and innovations. To this end, a workshop on deploying and implementing the technologies was held jointly by FHWA and AASHTO Technology Implementation Group.

#### **FINANCIAL HIGHLIGHTS**

The Federal Highway Trust Fund (HTF) is the source of funding for Federal-aid Highway and Transit programs. Funds are generated from excise taxes on gasoline, diesel, and other motor fuels, excise taxes related to the sale and use of commercial trucks, and interest. The HTF revenue totaled \$32.604 billion in FY 2002. Approximately 92 percent of the receipts were from excise taxes on fuels. As illustrated in Figure 1, HTF revenues have declined in recent years after a peak of \$35.26 billion in 1999. Still, HTF revenues have increased four-fold since 1980, when receipts were \$7.65 billion.

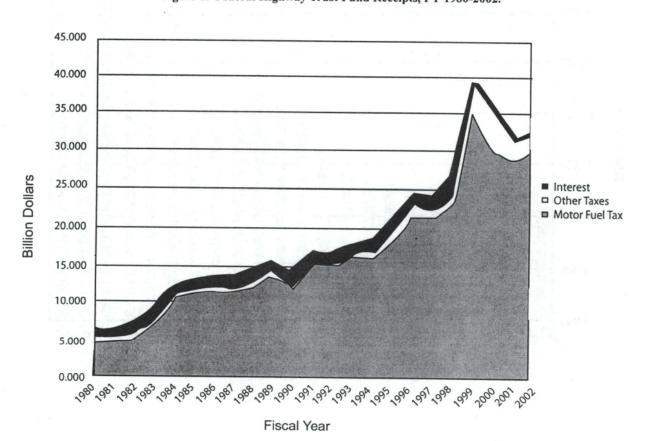


Figure 1. Federal Highway Trust Fund Receipts, FY 1980-2002.

As illustrated in Table A, cost outlays (less transfers to Transit, Railroad, Federal Motor Carrier Safety, and NHTSA) were \$31.031 billion in FY 2003. Approximately 59 percent of the Federal Highway portion of the program funds was drawn from Surface Transportation Program (24.4 percent), National Highway System (21.3 percent), and Interstate Maintenance Program (13.4 percent).

TABLE A. Distribution of Federal Highway Program Cost Outlays, FY 2003 (Source: FY 2003 FHWA Financial Statement, less transfers to Transit, Railroad, Federal Motor Carrier Safety, and NHTSA Programs.)

Program Title	Cost (\$ Million)	% Total Program
Surface Transportation Program	7,373.7	24.4
National Highway System	6,414.4	21.3
Interstate Maintenance Program	4,032.8	13.4
Bridge Program	3,318.4	11.0
Minimum Guarantee	2,832.3	9.4
Other Miscellaneous Programs <sup>1</sup>	2,275.8	7.5
High Priority Projects	1,328.5	4.4
Congestion Mitigation and Air Quality	884.4	2.9
Federal Lands Highway	369.6	1.2
Administration	324.2	1.1
Research and Development	242.5	<1.0
Emergency Relief	172.0	<1.0
Woodrow Wilson Bridge	147.6	<1.0
Planning	139.3	<1.0
Safety Programs	127.6	<1.0
Credit Program (TIFIA)	80.1	<1.0
Minimum Allocation	56.4	<1.0
Bureau of Transportation Statistics	35.4	<1.0
State Infrastructure Bank	14.4	<1.0
Гotal Program	\$30,169.4	100%
Miscellaneous Highway Trust Funds	347.0	
Appalachian Highway System	323.1	
Miscellaneous Appropriations	191.1	
Total .	\$31,030.6	
Includes Allocated Programs to Departments of Interior and Transportation		

#### **Performance Measures**

SAFETY

Measure: Rate of highway-related fatalities per 100 million VMT.

Data Source: The NHTSA Fatality Analysis Reporting System (FARS) and the FHWA Highway Performance Monitoring System (HPMS).

Scope of Data: The number of fatalities is obtained from FARS data, a census of fatal traffic crashes within the 50 States, DC., and Puerto Rico. To be included in FARS, a crash must result in the death of an occupant of a vehicle or a nonmotorist within 30 days of the crash. The FARS data is a 100 percent count of fatal crashes collected from police crash reports, and other State data. The FARS data cover all roadways open to the public, using the NHS classification of roads. Pedestrian and bicycle fatalities that occur on public highways but do not involve a motor vehicle are not recorded in FARS; however, this is a small number of fatalities. The VMT data are obtained from the FHWA HPMS, which is based on state-reported estimates of travel using various levels of sampling dependent on road type.

Measurement Methodology: The FARS data are collected in each state, translated into a standard format, and transmitted to the NHTSA. Data are collected from police crash reports, state vehicle registration files, driver licensing files, highway agency records, vital statistics, death certificates, coroner/medical examiner reports, hospital medical reports, and emergency medical service reports. The HPMS is an integrated database that relies on the state highway agencies to annually report area wide data, universe data, standard sample data, donut area sample data, and linear reference system data for geographic information systems.

Comments: The FARS data elements are modified slightly from year to year to respond to emphasis areas, vehicle fleet changes, and other needs for improvement. The FARS is a census of all highway traffic fatalities. As such it does not include information on crashes that produce only nonfatal injuries or that result in only property damage.

Measure: Highway-related injuries per 100 million VMT.

Data Source: The DOT information systems: the NHTSA General Estimates System (GES) for number of nonfatal injuries and FHWA HPMS for VMT both using states' data.

Scope of Data: Injured persons data are derived from GES, a nationally representative probability sample that makes national estimates of total nonfatal injury crashes, injured persons, and property damage only crashes. The GES data cover all roadways open to the public, using the NHS classification of roads. The VMT data is derived by FHWA from state-reported estimates of travel based on various levels of sampling dependent on road type.

Measurement Methodology: The GES collects general information about the location of crashes in its sample. The HPMS is an integrated database that relies on the State highway agencies to report area wide data, universe data, standard sample data, "donut" area sample data, and linear reference system data for geographical information systems. The area-wide data consist of five statewide summaries. The summaries include data on travel and fatal and nonfatal crashes. This summary will be dropped from future HPMS.

Comments: The GES sample plan only allows estimates of national totals, not detailed state-by-state breakdowns. Only general information is collected on the type of crash and highway system involved. The GES sample is designed to analyze vehicle and occupant injury information, not the roadway elements. Although various sources suggest that about half the motor vehicle crashes in the country are not reported to police, the majority of these unreported crashes involve only minor property damage and no significant personal injury. By restricting attention to police reported crashes, the GES concentrates on those crashes of greatest concern to the highway safety community and the general public.

#### MOBILITY AND PRODUCTIVITY

Measure: Percent of vehicle miles/kilometers traveled on the NHS that meet pavement performance standards for acceptable ride quality IRI less than or equal to 170 in/mi.)

Data Source: HPMS.

Scope of Data: Data include VMT on the HPMS reported NHS sections and pavement ride quality data reported using the IRI. The IRI is a quantitative measure of the accumulated response of a quarter-car vehicle suspension experienced while traveling over a pavement.

Measurement Methodology: Data are collected by the State Highway Agencies and reported to FHWA for the HPMS. They are obtained from measurement devices that meet industry set standards. Recommended measurement procedures are included in the HPMS Field Manual. Data up to 2002 are final estimates. The 2003 measure is not available, as states report highway performance data to FHWA some months after the end of the calendar year. The measure given is a projection from 1999–2002 trend data using least squares regression.

Data Issues: The IRI data for the approved NHS exist from 1995 onward. Past data (1993 and 1994) were collected on the proposed NHS, rather than the approved system. The NHS IRI data are not available prior to 1993. The HPMS requires States to report IRI data every 2 years. In the HPMS Field Manual, FHWA refers to AASHTO Provisional Standards for measurement of pavement profile as the preferred method for equipment and data collection.

A steering committee of Government officials review and approve changes to methodology or indicators prior to their implementation.

Measurement Methodology: The level of ITS component deployment in a metropolitan area is expressed as a ratio of actual deployment divided by the total possible, i.e., the number of freeway miles under electronic surveillance divided by the total freeway mileage.

Components are considered deployed once the level of deployment attains a specified threshold level based on key indicators. Integration is defined as the sharing of data between agencies associated with the different jurisdictions responsible for ITS infrastructure. Jurisdictions include state DOTs responsible for management of freeways and incident management programs, city government agencies that manage most of the traffic signal systems, and public transit authorities that manage most bus and rail services. The level of integration is determined by the extent that these three organizations employ technology to share and use transportation data to increase system capacity.

Data Issues: This indicator does not reflect the full breadth of deployment or integration activities. For example, while it establishes the existence of basic integration of essential components, it does not confirm that all possible or desirable integration links exist in a metropolitan area. Similarly, the attainment of a deployment threshold only confirms a substantial commitment to the use of ITS technology but does not indicate that all needed deployment is complete.

#### HUMAN AND NATURAL ENVIRONMENT

Measure: Ratio of wetland replacement resulting from Federalaid Highway projects.

Data Source: State DOT wetland mitigation databases.

Scope of Data: The summary data reflects the total acres of wetlands impacted versus total acres of mitigation that are provided. Annual data is available beginning with FY 1996.

Measurement Methodology: Data are compiled by the DOTs using local sources. A FHWA-sponsored national wetlands management database is under development.

Data Issues: The uniformity of the data is not guaranteed, since it is subject to interpretation by the state DOT. In particular, there is no uniform definition of what should be reported as acres mitigated. The FHWA has provided guidance to the States as to which mitigation activities are to be reported.

Measure: Number of exemplary ecosystem initiatives.

Data Source: State DOTs and FHWA field offices submit

ecosystem and habitat conservation initiatives for consideration by FHWA Headquarters offices.

Scope of Data: The objective is to increase ecosystem and habitat conservation by implementing a minimum of 30 exemplary ecosystem initiatives in at least 20 states or Federal Lands Highway Divisions by September 30, 2007. So far, eight initiatives have been selected across the country. At least 22 more efforts are to be identified across at least 12 additional states or Federal Lands Highway Divisions over the next 4 years.

Measurement Methodology: The FHWA has prepared and distributed guidance outlining the criteria for selection of exemplary ecosystem initiatives. The Headquarters selection team will use these criteria to judge the merits of initiatives submitted for consideration. Initiatives may be designated as exemplary ecosystem initiatives if they meet a majority of the selection criteria.

Data Issues: The data may not represent all ecosystem and habitat conservation initiatives underway, since submittals will be made at the discretion of state DOTs and FHWA field offices.

Measure: The number of States with integrated approaches to multi-modal planning, the environmental process, and project development at a systems level; and/or CSS at a project level.

Data Source: FHWA Division Offices

Scope of Data: Data is collected as states meet the criteria for CSS/CSD. Work continues with the Division Administrator Advisory Council to refine the criteria for integrated approaches.

Measurement Methodology: Each FHWA division office is requested to report the data from the states meeting the criteria.

Data Issues: Some states feel that they have been practicing a form of CSS/CSD in the past and therefore, should be considered as meeting the criteria for CSS/CSD and or integrated approaches.

Measure: The number of areas in a transportation conformity lapse.

Data Source: FHWA Division Offices.

Scope of Data: The FHWA and the FTA jointly make conformity determinations within air quality nonattainment and maintenance areas to ensure that Federal actions conform to the purpose of SIPs. The transportation conformity process is intended to ensure that transportation plans, programs, and projects will not result in new violations of the NAAQS, increase the frequency or severity of existing NAAQS violations, or delay the attainment of the NAAQS in designated nonattainment (or maintenance) areas.

announcement in the Federal Register advising interested parties that an EIS will be prepared and circulated for a given agency action. ROD: A final Federal decisionmaking document, relative to EIS, that presents the basis for selecting and approving a specific course of action, including identification of the alternatives considered, measures to minimize harm and an itemized list of commitments and mitigation measures.

Measurement Methodology: Information on development time from the Notice of Intent to: a) Draft EIS; b) Final EIS; c) Record of Decision; d) EIS with 4; and e) EIS without 4(f) will be tracked.

Data Issues: This is a new measure. Data collection procedures are still being refined.

Measure: Customer and partner satisfaction.

Data Source: The Agency partner satisfaction feedback is gathered through an on-line survey administered to FHWA partners.

Scope of Data: The overall satisfaction score will be tracked over time to monitor changes in partner satisfaction on a 5-point scale.

Measurement Methodology: The survey is a centrally administered survey for administration in each of the 50 states, the District of Columbia, and Puerto Rico, with options for FHWA Division office modifications. A "moving average," will be applied by surveying approximately 13 states every 6 months completing the cycle in 2 years.

Data Issues: Since this is a survey of perceptions, ratings are subjective.

Measure: Employee job satisfaction (percent positive responses).

Data Source: Agency employee feedback using the all-employee survey instrument.

Scope of Data: Job satisfaction was determined to be the overarching measure for this category. Percent positive responses means that respondents either "strongly agree" or "somewhat agree" with the statement, I am satisfied with my job.

Measurement Methodology: The all-employee Survey is a biennial survey. The current strategy is to administer the full survey biennially (in odd numbered years) and a shorter (10-12 question) survey in even numbered years.

Data Issues: None.

Data Source: Departmental Accounting and Financial Information System.

Scope of Data: Percent of Payroll (salary plus benefits)— Percentages represent total investment in training including tuition, contract cost, participants travel and per diem and instructor travel for all training and career development courses and programs for FHWA employees.

Measurement Methodology: Amount of dollars spent on training and development divided by salary and benefits.

Data Issues: None.

Measure: Percent of full employment (FTE).

Data Source: DOT Consolidated Personnel Management Information System.

Scope of Data: This metric is a key indicator of success in retaining technical expertise. It can also be used as an indicator of salary expenditures versus budget limitations, and serve as a warning to reduce hiring or assigned positions distributed within the Agency when the 100 percent level is reached or exceeded.

Measurement Methodology: The full employment level represents the number of employees that the Limitation on Administrative Expenses (LAE) set by Congress will support. The percentage of full employment level is the number of employees on-board at the end of each month divided by the full employment level. Federal Lands Highways "000" positions are excluded from the LAE employment ceiling.

Data Issues: Hiring rates and separation rates vary throughout the year. Employment levels tend to peak during the summer months and decline a bit during the fall and winter months. More staff retire in late December, early January and September than in other months. More employees are hired in June and July, including recent college graduates in the Professional Development Program and students in the Summer Employment Program.

### **FHWA OFFICES**

FHWA offices are located in all 50 states, plus Washington, D.C. and Puerto Rico. For more information, please contact one of our offices below.

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